HUNGARY/Nuclear Physics - Installations and Instruments.

C

Methods of Measurement and Research

Abs Jour

: Ref Zhur Fizika, No 8, 1959, 17148

Author

: Kantor, Karoly; Zsdanszky, Kalman

Inst Title

: Automatic Cloud Chamber for the Investigation of Cosmic

Oris Pub

: Magyar fiz. folyoirat, 1958, 6, No 3, 191-208

Abstract

: A thorough study is made of problems of the construction, preparation, and adjustment of an automatic cloud chamber, controlled by Geiger-Muller counters. The separate units of the chamber and the control circuits are described.

Card 1/1

KANTOR, K.

SCIENCE

Periodicals MAGYAR FIZIKAI FOLYOIRAT. Vol. 6, no. 4, 1958

KANTOR, K. A simpleeledtromagnetic liquid faucet applicable in a pipe system with 0-h atmospheric pressure. p. 373.

Monthly List of East European Accessions (EEAI) LC. Vol. 8, No. 5, May 1959, Unclass.

KANTOR, K.; GEMESY, T.

Stereochart comparison unit. p.139

MAGYAR FIZIDAI FOLYOIRAT. Budapest, Hungary. Vol. 7, No. 2, 1959

Monthly List of East European Accessions (EFAI), LC. Vol. 8, No. 9, September 1959 Uncl.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6"

MANAGER CONTROL OF STREET, STR

BAKOS, Jozsef; KANTOR, Karoly

Light diffraction of slits for extended light sources. Koz fiz kozl MTA 8 no.2/3:131-144 *60. (EEAI 10:4)

1. Magyar Tudomanyos Akademia Kozponti Fizikai Kutato Intezete. (Light)

と、これのこれできることのとのでは、これでは、一般などは、はれては、はないないないない。 これのことは、これのことは、これのことは、これのことは、これのことは、これのことは、これのことは、これのことに

BAKOS, Jozsef; KANTOR, Karoly; VARGA, Peter

Interference in the Michelson's interferometer in case of extended light sources. Koz fiz kozl MTA 9 no.4:207-226 '61.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6"

The second that the substitution of the substi

BAKOS, Jozsef; KANTOR, Karoly

Spatial dostribution of the visibility of the interference picture in Michelson's interferenceter. Koz fiz kozl MTA 9 no. 3:129-140 '61.

1. Fizikai Optikai Laboratorium.

THE RESIDENCE OF THE PROPERTY OF THE PROPERTY

BAKOS, Jozsef; ERKOKURTI, Zoltan; KANTOR, Karoly

Laboratory mechanical unit system in special regard to optical and semi-automatic measurements. Koz fiz kozl MTA 9 no.3:171-180 '61.

1. Fizikai Optikai Laboratorium.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6"

A CONTRACT OF THE CONTRACT OF

BAKOS, Joseef; KANTOR, Karoly; VARGA, Peter

Interference in the Michelson's interference in case of extended light sources. Kos fis kosl MTA 9 no.4:207-226 161.

3/058/63/000/001/063/120 A160/A101

AUTHORS:

Bakos, József, Kántor, Károly, Náray, Zsolt

TITLE:

The interference between series of wave trains obtained by the method of series amplitude fission

PERIODICAL: Referativnyy shurnal, Fizika, no. 1, 1963, 65, abstract 10461 ("Magyar tud, akad, Kösp, fiz, kutato int, kösl,", no. 5 - 6, 1961, 9, 307 - 316, IV, X, Hungarian; summaries in Russian and English)

By means of amplitude fission, for instance, with the help of a TEXT: plane-parallel plate, the given train of waves may be transformed into a series of coherent wave trains. The interference of such series is studied, and an investigation of the possibility of using this method is carried out.

[Abstracter's note: Complete translation]

Card 1/1

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6"

71:

A CONTROL OF SECURITY SECURITY

ERDOKURTI, Zoltan; KANTOR, Karoly

The order and visibility of interference in the Michelson interferemeters in case of rectangular centered light sources. Koz fiz kozl MTA. 11 no.2:99-116 163.

. 1

A CONTRACTOR OF THE PROPERTY OF THE SHARE SHARE

ERDOKURTI, Zoltan; KANTOR, Karoly

Visibility and order of interference in the Michelson interferometers in case of excentric light sources. Koz fiz kozl MTA 11 no.2:117-125 163.

(1) 10 mm 1

ERDOKURTI, Zoltan; KANTOR, Karoly

Accuracy testing of mechanical building block elements. Koz fiz kozl MTA 11 no.61475-478 *63.

ERDOKURTI, Zoltan; KANTOR, Karoly

The ordinal of interference in the Michelso interferometer in case of circular, centered light sources. Kcz fiz kozl MTA 10 no.4:269-288 '62.

CONTRACTOR OF THE PROPERTY OF

KANTOR, L.

Possibilities of Increasing Capacity and Making Better Use of Existing Capacity in the Haberdashery Industry." p. 352 (Magyar Textiltechnika. No. 11/12, Nov../Dec, 1953 Budapest,)

Vol. 3, no. 6
So: Wenthly List of East European Accessions,/Library of Congress, June 1954, Uncl.

KANTOR, L., kand.tekhn.nauk

Reception of three wire broadcast programs. Radio no.4:18-20 Ap
*61. (Wire broadcasting)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6"

THE RESERVE OF THE PROPERTY OF

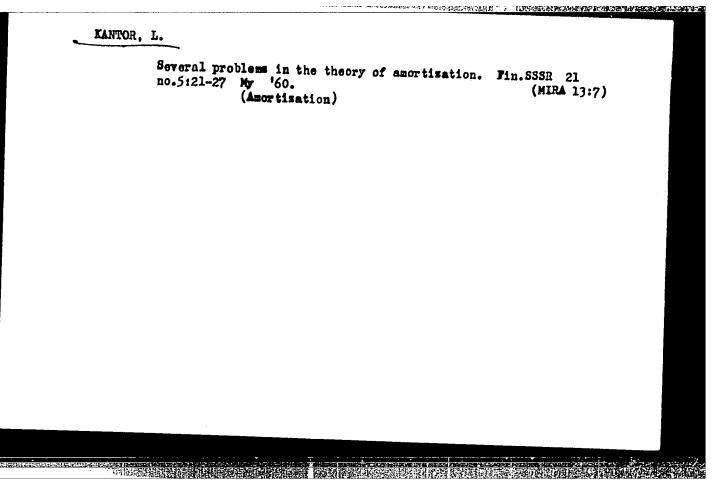
"APPROVED FOR RELEASE: 06/13/2000

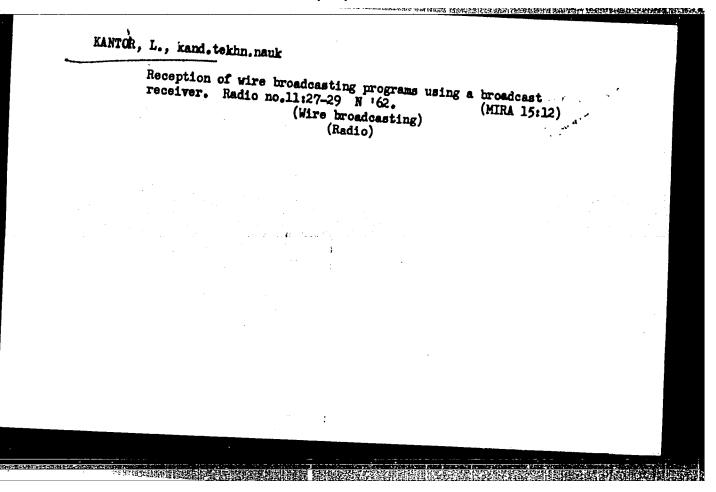
CIA-RDP86-00513R000520420002-6

KANTOR, L.

"The significance of a preventive control in factories for the protection of the workers' health." p. 102 (NEPEGES2SEGUCY, Vol. 34, no. 4 April, 1953, Budapest.)

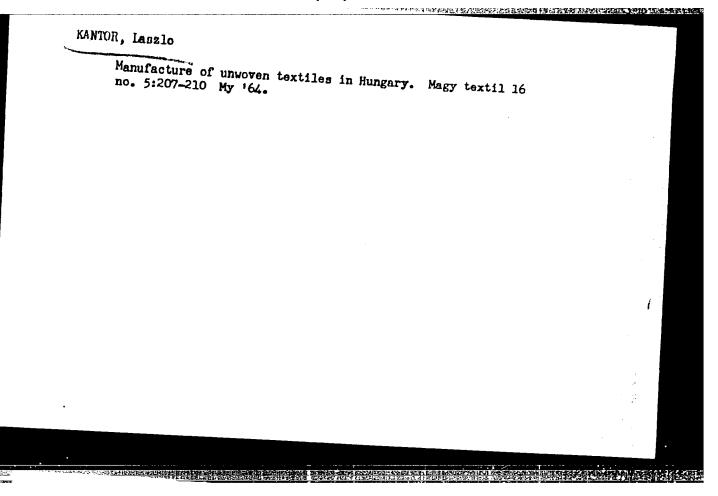
SO: Monthly List of East European Accessions, Vol. 2 #8, Library of Congress, Aug. 1953, Uncl.





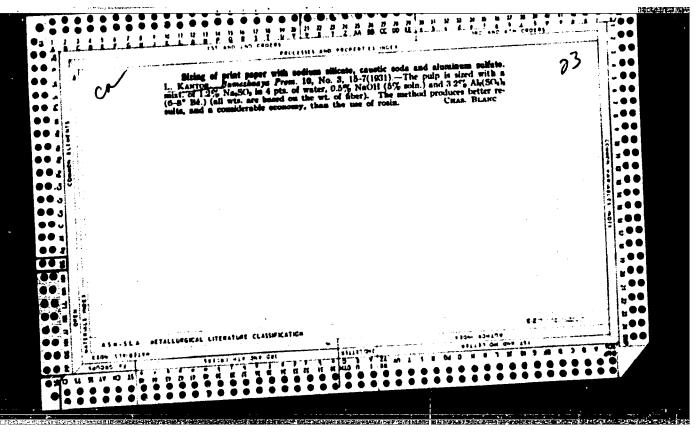
New trends in textile manufacture without weaving. Magy textil 14

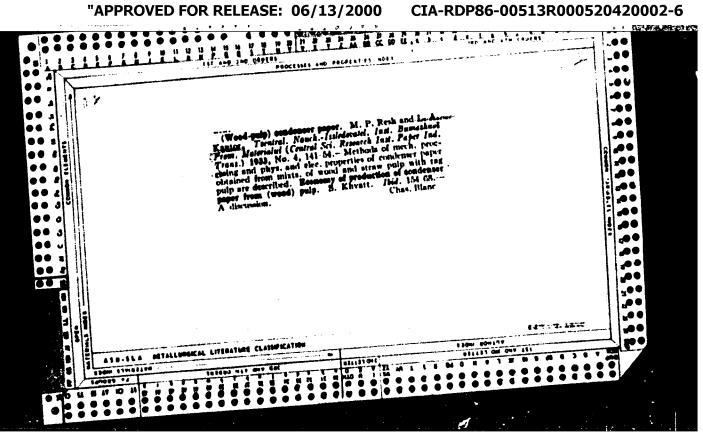
APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6"

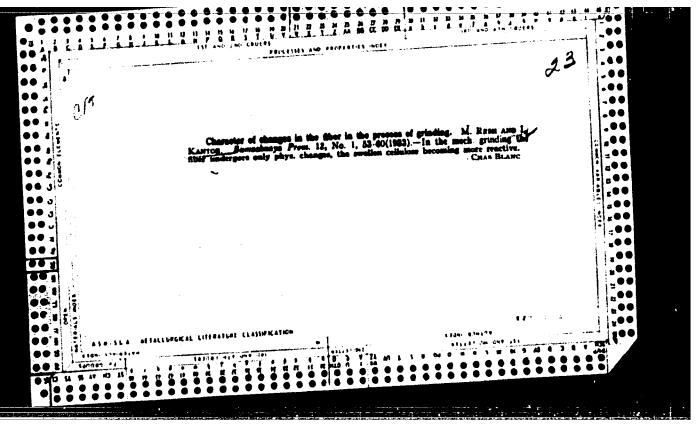


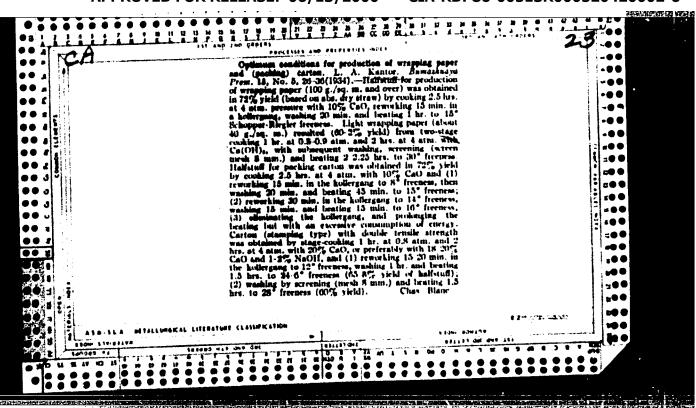
KANTOR, Laszlo

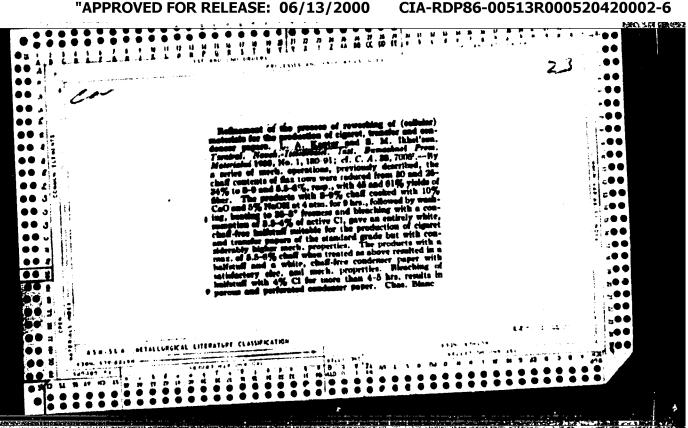
The 4th Hannover Exhibition of Textile Machines from the point of view of the smallware industry. Magy textil 16 no.7:328-329 Jl 164.

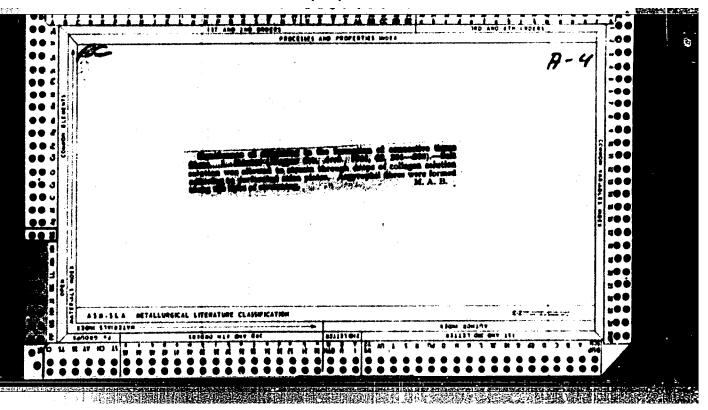


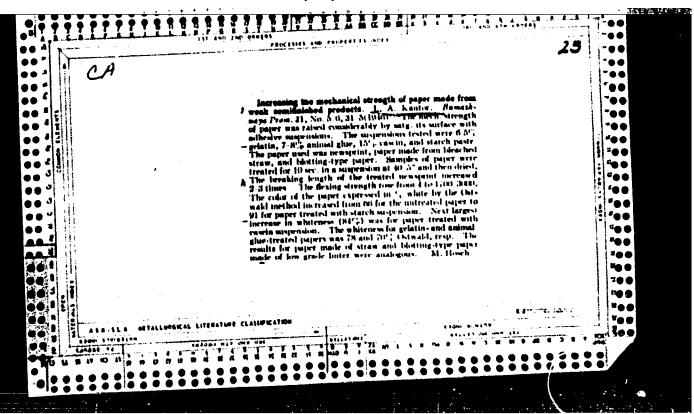


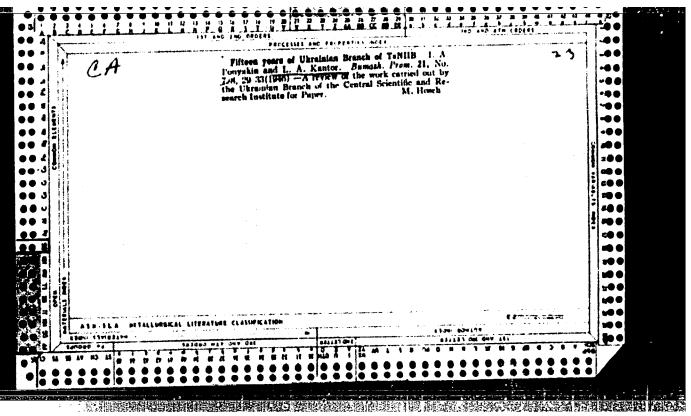












- 1. KANTCR, L. A.
- 2. UJSR (600)
- 4. Paper Industry
- 7. Producing nightly absorbent, mechanically tough paper. Bum. prom. 27, No. 5, 1952

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6"

KANTOR, L.A., kandidat tekhnicheskikh nauk. Production of half stuff from rags. Bum.prom. 22 no.9:19-21 S 153. (MIRA 6:8) (Rags)

Kantor, L. A.

New methods for the production of rag fiber. Tr. from the Russian. p. 202. PAPIR A CELULOSA. (Ministerstvo lesu a drevarskeho prumyslu) Praha. Vol. 9, no. 9, Sept. 1954.

SCURCE: EEAL - IC Vol. 5 No. 10 Oct. 1956

KANTOR, L.A., kandidat tekhnicheskikh nauk.

Production of newsprint with low weight per square meter. Bum.prom. 30 no.3:11-13 Mr '55. (MIRA 8:4) (Newsprint)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6"

The use of carboxymethyl wood pulp in the paper industry. Bun.
prom. 30 no.6:12-14 Je '55.
(Paper industry) (Cellulose)

Hasticity in paper; letter to the editor. Bum.prom.31 20.8:15
Ag '56. (Newsprint--Testing) (MLRA 9:10)

KANTOR, L.A.

Simplified technology of producing rag semipulp. Bum.prom.31 no.12: 20-21 D 156. (MLMA 10:2)

1. Ukrainskiy nauchno-issledovatel'skiy institut bumagi. (Woodpulp industry) (Rags)

MARTOR, L.A., kand.tekhn.nauk; KEMPEL', T5.Ye., insh.

Disinfection of waste paper. Bum.prom. 34 no.9:12 8 '59.
(MIRA 13:2)

1. Ukrainskiy nauchno-issledovatel'skiy institut tsellyuloznoy
i bumashnoy promyshlennosti.
(Paper-Disinfection)

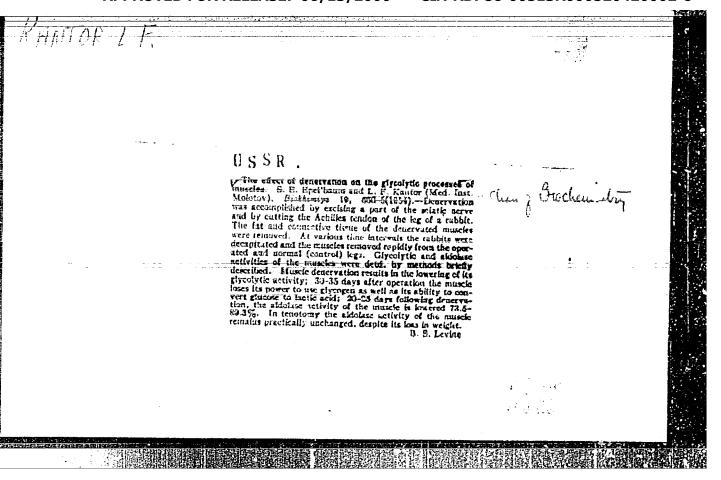
KANTOR, L.A., kand.tekhn.nauk; KOZINA, S. M.

Simplified method of manufacturing a moisture-resistant paper twine. Bum. prom. 34 no.7:12-13 J1 159. (MIRA 12:10)

1. Ukrainskiy nauchno-issledovatel skiy institut tsellyulosnoy i humashnoy prograhlennosti.
(Paper) (Twine)

KANTOR, L.A., inzh.; MEYERSON, V.D., inzh.

Automatic distribution device of compressed air of high pressure. Khim. i neft. mashinostr. no.6:34-35 D *64 (MIRA 18:2)



KANTOR, L.F.

Effect of the denervation on the glycogen, ATP and content of muscles in experimental hypothyroidism. Vop. med. khim. 6 no. 6:619-624 N-D '60. (MIRA 14:4)

1. Chair of Biochemistry, Medical Institute, Perm.
(MUSCLES) (GLYCOGEN) (ADENOSINE TRIPHOSPHATE)
(COENZYMES) (URACIL)

KANTOR, L.I.; MALYSHEV, V.G.

Machine for digging foundation pits for entenary poles.

Biul.tekh.-ekon.inform. no.7:56-59 '60.

(MIRA 13:7)

(Excavating machinery)

KAMTOR, L.L.

Spectrum analysis of gases by means of photoelectric registration of spectra. Sbor. mat. po vak. tekh. no.24:74-83 '60.

(MIRA 14:2)

(Gas tubes)

(Mass spectrometry)

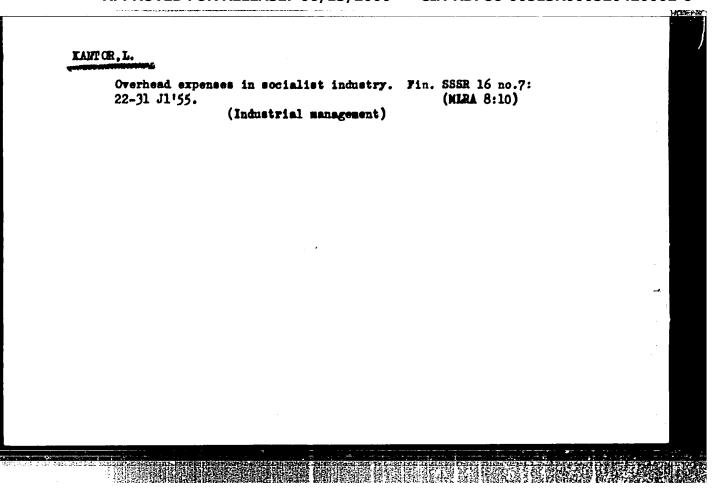
APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6"

N/5 752.21 .K21

Kantor, Lazar' Moiseyevich

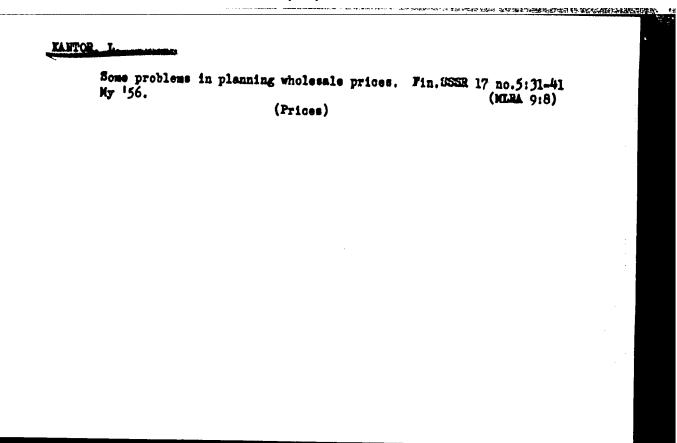
Organizatsiya vnutrizavodskogo khozrascheta [Organization of intra-factory cost-accounting] Moskva, Gosplanizdat, 1950.

102 p. tables.



LEVIN, Mikhail Israilevich; MATOR L.M. kandidat ekonomicheskikh mauk, nauchnyy redaktor.

Major construction work. Ekon.prom.pred.no.5:10 '56. (MIRA 10:3) (Bibliography-Construction industry)



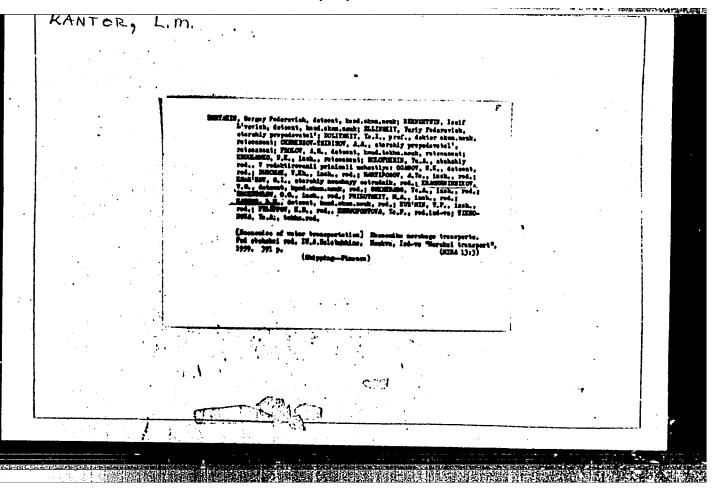
KANTOR,	L.				
	Determination of production costs in mixed operations. Bukhg.uchet. 14 [i.e. 16] no.8:6-11 Ag *57. (Costs Industrial)	(MLRA 1	10:8)		
				·	
S. S. STATESTAN SERVER AND SERVER					

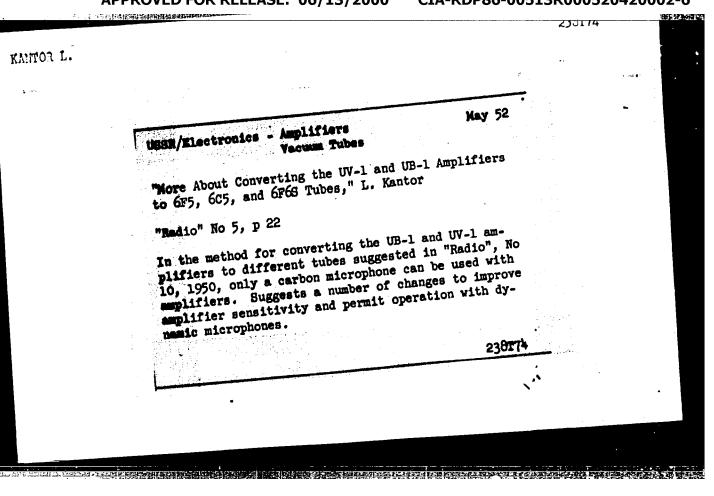
KANTOR, Lazar' Moisoyevich; TYAGAY, Ye., red.; PIOTROVICH, M., tekhn.red.

[Cost in socialist industry] debestoimost' v sotsialisticheskoi promyshlenmosti. Moskve, Gos. isd-vo polit. lit-ry, 1958. 274 p.

(Gosts, Industrial)

(MIRA 11:5)





KANTOR, L., (Moscow)

USSR/Electromics - Radio Receivers Distortion

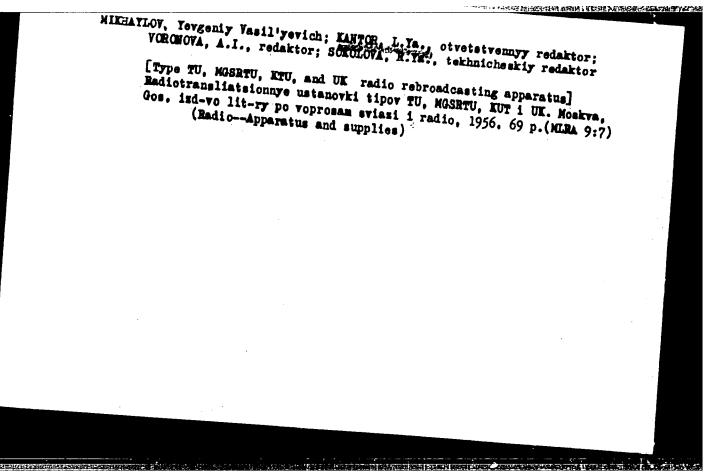
Oct 53

"Improving the PTS-47 Receiver," L. Kantor, Moscow

Radio, No 10, pp 32-34

Gives schematic diagram of detector circuit used in PTS-47 since 1951 and discusses changes to decrease non-linear distortion. Harmonic coeff becomes 4-65 when modulation factor is up to 100%. Sensitivity decreases as much as 40 to 80m, and noise level decreases. A Marrow pass band in the low freq portion of the 6-7 kc band is still a defect.

276126



Reducing menlinear distortion in the "FTS-47" receiver. Radio ne.1:22 Ja '56. (MIRA 9:4) 1.Moskovskaya oblastnaya IRTS. (Radio--Receivers and reception)

CONTROL OF THE WARRENCE COME & MODERNIC CONTROL OF SECURITIES AND ASSESSMENT AND ASSESSMENT OF THE PROPERTY OF

KANTOR, Lev Yakovlevich: LEVINA, I.I., otvetstvennyy redaktor; MOVIKOVA, Ye.S. redaktor; MERISLAVSKAYA, L. Sh., tekhnicheskiy redaktor.

[Measurements and adjustments of radio reception and rediffusion centers] Ismereniia i nastroika radiouslov; epyt rabety preisvodstvennei laberatorii DRTS. Moskva, Gos.isd-vo lit-ry po veprosam sviasi i radio. 1957. 71 p. (MIRA 10:4)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6"

AUTHOR:

Kantor, L.Ya.

267

TITLE:

Choice of interstage coupling in FM receivers. (Vybor skhemy mezhkaskadnoy svyazi v priyemnikakh s chastotnoy modulyatsiyey).

PERIODICAL: "Elektrosvyaz'" (Telecommunications), 1957, No.4, April,

pp. 29-32 (U.S.S.R.)

ABSTRACT:

While in AM receivers the interstage coupling networks are uniquely defined by the degree of their approximation to the filters with a rectangular frequency response (ideal characteristic), the problem becomes more complicated in FM reception. In this case the width of the pass-band and the form of resonance curve determine the amount of non-linear distortion. In order to compare the two systems, it is enough to compare two of the most common coupling networks: single-tuned circuits and critically coupled doubletuned transformers. Such a comparison has been made by Gonorovskiy (ref.1 "Radiosignals and transients in radio networks;" Svyaz'izdat, 1954), who has shown that double-tuned transformers are preferred in FM when a small amount of distortion is required (third harmonic distortion only). The author of the present article extends the treatment as given in (1), which he does not find to be conclusive and makes a few corrections to the results given by Manayev (ref.2:

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6"

Choice of interstage coupling in FM receivers. (Cont.)²⁶⁷ Bandwidth in FM reception necessary to avoid non-linear distortions, Radiotekhnika, No.5, 1948). The third harmonic distortion only is considered and mathematical treatment of the expression for it, as given in (1), permits a graphical comparison of this distortion as introduced by the single circuits and double-tuned transformers. Further mathematical treatment permits the evaluation of it for n cascaded stages, for which the coefficient of distortion is transformed into the form

where K, is the distortion of one stage only and Z, is a function determining changes in K, with increasing number of stages. A table of the values of X, is given for n = 1, 2, 3, 4 and 8. Two other tables give the selectivity and respective noise bandwidths of n-stage amplifier with the modulation index m = 5, frequency deviation f = 75 kc/s and K, = 0.5% for single circuits and double-tuned transformers. The author concludes that, if the adjacent channel interference can be neglected, i.e. in the case of low-sensitivity receivers with 2 or 3 stages of IF amplification - double tuned band-pass transformers are preferred. In the case of high-sensitivity fringe-area receivers

RHATOR, L. Va.

RECEPTION

"UHF FM Receiver with Frequency Feedback," by Engineer L. Ya. Kantor, Vestnik Svyazi, No 6, June 1957, pp 12-15.

Further detailed description of a receiver used for a wired-broad-cast reception unit, in which frequency feedback is used to reduce the nonlinear distortion and increase the selectivity. A complete diagram and coil-winding data are given.

Card 1/1

- 29 -

AUTHOR: TITLE:

PA - 2017 KANTOR, L.Y. Frequency Back-Coupling in Signal Receivers with Frequency Modulation. (Obratnaja svjaz po častote v priemnikah signalov s častotnoj modulaciej. Russian)

PERIODOCALe Radiotekhnika, 1957, Vol 12, Nr 1, pp 58-62 (U.S.S.R.)

Received: 2 / 1957

Reviewed: 3 / 1957

The skeleton scheme of a receiver with frequency modulation and frequency back-coupling is shown. For the case of a negative connection the ABSTRACT: frequency modulation of the local oscillator coincides as regards phase with the frequency modulation of the signal. From the equation set up for the voltage at the output of the frequency detector it can be seen that frequency back-coupling diminishes the influence exercised by the amplitude modulation of the signal upon output voltage. The introduction of frequency back-coupling also leads to a reduction of the voltage at the output of the frequency modulation of the signal. However, the same formula also shows that the depth of backcoupling is proportional to the amplitude of the input signal. In the case of a large signal the amplitude reserve of stability is exceeded, which leads to self-excitation. Therefore, the limiter must be conserved. This must be done also because the reduction of the inear range of the frequency detector necessary for the purpose of suppressing the modulation amplitude leads to a deterioration of the selectibility in the adjoining channel. Frequency back-coupling causes a considerable reduction of nonlinear distortions in the amplifier of the intermediate frequency as well as in the frequency detector. Besides, it must be taken into account that the signal has a reduced frequency deviation

CARD 1 / 2

THE RESIDENCE OF THE PROPERTY OF THE PROPERTY

AUTHOR:

, N. YM.

Kantor, L. Ya., Begular member of the Society.

TITLE:

On the Reduction of Nonlinear Distortions by Feeding Back (Ob umen'shenii nelineynykh iskazheniy obratnoy svyaz!yu).

PERIODICAL:

Radiotekhnika, 1957, Vol. 12, Nr 9, pp. 55-62 (USSR)

ABSTRACT:

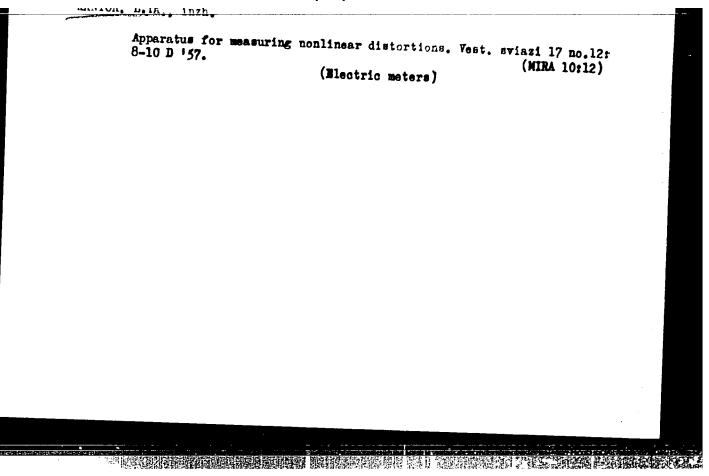
It is shown that the nonlinear distortions of amplifier with feeding back can at high frequencies only be judged by the difference tone coefficient. Formulae for the computation of this coefficient are given. Methods for the increase of efficiency of feeding back at highest frequencies are suggested. By means of a dependent scheme the definition of a system with a "nonlinearity dependent on the frequency" is given and the different distortion characteristic values for such systems compared with each other. There are 6 figures, q table, and 4 Slavio references.

ASSOCIATION:

Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi im. A. S. Popova.

37

Card 1/1



KANTOR, L. Ya. Cand Tech Sci -- (diss) "Frequency feedback in the frequencymodulation receivers of re Mos, 1958. 12 pp (Mos Electrical-Engineering Inst of Communications), 150 copies. Bibliography at end of text. (KL, 11-58, 117)

-64-

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6"

KANTOR, L. Ya.

SOV/106-58-12-12/13

AUTHORS: ¿L. Kantor; (V. Khatskelevich and L. Shur) Letters to the Editor (Pis'ma v redaktsiyu) TITLE: PKRIODICAL: Elektrosvyaz', 1958, Nr 12, pp 74-75 (USSR)

ABSTRACT: In the first letter, Kantor criticizes the article by Khatskelevich and Shur, "Compensation of Non-Linear Distortions by Envelope Negative Feedback in Radio-Transmitting Apparatus", Elektrosvyaz', 1958, Nr 4, and the second letter gives the authors' reply. Kantor states that the harmonic coefficient, as used by the authors, is only one criterion, the simplest but not the best. It introduces errors particularly at the higher These errors do not occur when the difference-tone method (as described by Kantor in Ref 1) is used. The second letter states that the concept of a "coefficient of non-linear distortions" (harmonic coefficient), to the first approximation, correctly describes the fundamental phenomena. This coefficient This coefficient can be measured easily with existing measuring apparatus. The authors concede that the difference-

Card 1/2 apparatus. Instantian augurate in some cases,

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6"

Letters to the Editor

SOV/106-58-12-12/13

particularly for amplifying equipment, but it is not suitable for transmitting equipment containing non-linear elements. They do not agree that the harmonic coefficient method introduces errors at the higher frequencies.

There are 2 references, one of which is Seviet, and one British.

Card 2/2

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6"

SOV/111-59-1-29/35

AUTHORS:

Kantor, L. Ya., Krutsko, G.P., Senior Engineers

TITLE:

An Experiment in Introducing FM Reception of Frequency Modulation Stations into Rediffusion Stations of the Moscow Oblast' (Opyt vnedreniya priyoma UKV ChM stantsiy na radio-

uzlakh Moskovskoy oblasti)

PERIODICAL:

Vestnik svyazi, 1959, Nr 1, pp 34 - 36 (USSR)

ABSTRACT:

The authors stress the convenience of additional radio programs transmitted from FM stations. FM reception experiments in the Moscow Oblast' are evaluated. At present the Khar'-kovskiye masterskiye UPP Ministerstva svyazi SSSR (Khar'kov work-shops of the UPP of the USSR Communications Ministry) are producing FM adapter parts for radio receivers. A sufficient amount of PTS-47 receivers was set free by the recent introduction of new TPS-54 receivers in the rediffusion stations. The remodeled PTS-47 receiver has 4 tubes, a sensitivity of 30 mv, an adjacent-channel sensitivity of 34 db, an image-channel sensitivity of 30 db, an amplitude modulation suppression of 30 db, the coefficient of the non-linear distortion is not above 2.5% in the 100 to 10.000

Card 1/3

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6"

SOV/111-59-1-29/35

An Experiment in Introducing FM Reception of Frequency Modulation Stations Into Rediffusion Stations of the Moscow Oblast'

oycle band, and an AFC of up to 46 db. The noise interference during reception was traced to engines of the old models of ZIS-5 and GAZ-AA automobiles and ST-35 telegraphic apparatus. About 60 rediffusion stations in the Moscow Oblast' have taken up experimental FM service. A distance of 70 to 80 km from Moscow is adequately covered. Reception in Zagorsk and Narofominsk was not free from interference. Retransmission stations on the sector Drezna - Orekhovo - Zuyevo yielded additional 10 to 20 km depending on the anterma construction and local amounts of interferences. The author concludes that introduction of an FM program would be desirable, but two major obstacles have to be first overcome: the relatively high cost of the new receivers and the adverse feeling of many rediffusion station workers towards the new idea which requires a special psychological readiness

Card 2/3

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6"

SOV/111-59-1-29/35

An Experiment of Introducing FM Reception of Frequency Modulation Stations Into Rediffusion Stations of the Moscow Oblast'

for the "old hands". There are 2 sets of diagrams and 1 block diagram.

ASSOCIATION: Proizvodstvennaya laboratoriya DRTS Moskovskoy oblasti (The Industrial Laboratory of the DRTS of the Moskva Oblast)

Card 3/3

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6"

6(4) SOV/111-59-8-10/30

AUTHOR: Kantor, L.Ya., Candidate of Technical Sciences,

TITLE: A VHF FM Receiver for the Radio Broadcasting Center

PERIODICAL: Vestnik svyazi, 1959, Nr 8, pp 9-10 (USSR)

ABSTRACT: The article discusses the requirements for a VHF FM

receiver for use in broadcasting centers, and describes a circuit developed at the Proizvodstvennaya laboratoriya moskovskoy cblastnoy DRTS (Production Laboratory of the Moscov Oblast DRTS) (IRPA) which meets the specific requirements. The author first deals at some length with a number of the circuit specifications and problems connected therewith: distortion, sensitivity, selectivity; choice of circuits: the local escillator, limiter-discriminator, automatic frequency control (AFC) the use of a local oscillator feedback circuit (OSCh) for additional AFC control, and the use of single tuned circuits instead of bad-pass filters in inter-stage coupling.

Card 1/3 The circuit developed on the basis of these considerations, and built around the now discontinued PTS-47

SOV/111-59-8-10/30

A VHF FM Receiver for the Radio Broadcasting Center

receiver (replaced by the TPS-54), is then described and the circuit diagram presented. The tube line-up is as follows: RF amp-mixer-6N3P, local osc-6N3P, I. F. amp (4cm) - 5Zh3 (2), limiter-6Zh4, discriminator-6Kh6, and 1st audio amp - 6Zh7. A control point is indicated for connection of a DC voltmater (type VLU, AVO-5, Ts-20) for tuning adjustments or antenna orientation. The following specifications are given: sensitivity - 10-30 mv, distortion - 2.5% maximum at 50-10,000 cps, AM on carrier frequency - 30-40 db down, adjacent channel selectivity figure - 34 db, image ratio figure - 30 db, local oscillator voltage on the antenna terminals does no exceed 1.5 mv, holdin range $-\pm$ 1.5 mc, locking range - about \pm 250 kc, drift (AFC off) for line voltage variations of \pm 10% - no more than 70 kc, warm-up drift - 130 kc. The author states that the given parameters allow the receiver to be used at unmanned stations. Similar receivers are already installed at 60 radio broad-

Card 2/3

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6"

A VHF FM Receiver for the Radio Broadcasting Center

casting centers in Moscow provinces, and have been found reliable in operation. There is 1 schematic diagram.

Card 3/3

1.1

68058 SOV/106-59-10-5/11

6.4800,6.4400

Kantor, L. Ya

of a F.M. Receiver with

AUTHOR: TITLE:

The Interference-Stability

PERIODICAL: Elektrosvyaz', 1959, Nr 10, pp 38-42 (USSR) ABSTRACT: The Author considers the factors influencing the interference-stability of a f.m. receiver with frequency negative feedback (FNF) and compares his conclusions with those published previously by Ageyev, Vinitskiy and others. Ageyev (Ref 1) has shown that in a f.m. agency control (DEC) the receiver with resonant frequency control (RFC) the equivalent resonance curve of the controlled circuit is widened until, when the control coefficient equals unity, the curve becomes infinitely wide. Any gain in interference stability can only be achieved by the

interference-stability can only be achieved by the frequency-sensitive circuit making the value of the control coefficient different from unity within the limits of the useful modulation frequencies and in this way reducing the passband of the receiver. Hence, reception of a f.m. wave with a given distortion is obtained by receiver at each instant only next of the

obtained by passing at each instant only part of the whole spectrum - the active band - through the filter.

Card 1/4

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000520420002-6"

68058

80V/106-59-10-5/11

The Interference-Stability of a F.M. Receiver with Frequency Negative Feedback

It is shown that the frequency negative feedback (FNF) system, proposed — Chaffee (Ref 2) also reduces the active passband. The gain in selectivity in a receiver with FMF is, in fact, determined by the i.f. amplifier. Inequality of the frequency characteristic of the RFC with modulation frequency is reduced (1 + βk) times and the equivalent resonance curve is correspondingly widened. In this respect, the two systems are similar, but there are differences. In the case of the RFC system with unrestricted bandwidth, the input voltage to the detector does not change, whereas in a receiver with FNF, both the output and the controlling voltage are error signals, which depend directly on the depth of feedback. When (βk) → ∞, the frequency deviation in RFC tends to zero. Therefore, in a FNF system exact following is not realised and there is incomplete control. If a sinusoidal interference, acting at the receiver input, sets up a frequency deviation of a frequency-modulated signal in the limits of the working band, then the feedback does not change the signal-to-noise ratio at the receiver output. If the modulation

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6"

68058

SOV/106-59-10-5/11

The Interference-Stability of a F.M. Receiver with Frequency Negative Feedback

frequency of the interference lies outside the limits of the working band, then at the output of a RFC system the ratio of the frequency deviation due to the interference and due to the desired signal increases because the FNF widens the resonance curve. But in so far as the feedback depth is limited, not only because of reduction in the output voltage of the receiver but also because of stability considerations, the loss is also limited. Thus, the effective reduction of non-linear distortions by frequency feedback makes a reduction in the passband and a gain in selectivity possible, and this gain exceeds the loss. The appearance at the output of the detector of audible interference is due to a non-ideal detector. With an unmodulated signal and interference, a constant component appears at the output of a non-ideal detector as well as an oscillation with a frequency Fnom. With modulation of the interference, the value of this component changes, causing audible interference. For simplicity, the interference is evaluated simply by the value of the d.c. component.

Card 3/4

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6"

68058

SOV/106-59-10-5/11

The Interference-Stability of a F.M. Receiver with Frequency Negative Feedback

Then, in so far as the constant component is a product of the non-linear distortion arising in the receiver itself, it can be reduced by feedback. In a receiver with FNF, the modulation of the signal by interference in the adjacent channel is reduced in accordance with the narrowing of the resonance curve by the RFC itself, but with FNF, the d.c. component is reduced $(1 + \beta_0)$ times. In the absence of, or with small interference, the useful signal at the output of the receiver is also reduced $(1 + \beta_0)$ times by the FNF and thus the signal-to-noise ratio at the receiver output remains the same as for a wide-band receiver without FNF, although the interference at the input has increased. The gain in suppression of AM which is possible in a receiver with FNF (Ref 3) is related to a reduction in the band of the detector and leads to loss in selectivity. V. M. Sidorov advised in this work. There are 4 figures, and 9 references, 5 of which are Soviet, 2 English and 2,

SUBMITTED:

April 4, 1958

Card 4/4

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6"

Experience in using shortwave FM reception at wire broadcasting stations in Moscow Province] Opyt vnedrenits UKY ChM priess na rediouslakh Moskovskoi oblesti. Moskva, Gos.isd-vo'lit-rp po voprosan sviasi i radio, 1960. 31 p.

(Moscow Province—Wire broadcasting)

KAWFOR, L.YB.; GUMNLYA, A.N.; ROZHMBERG, Ya.G.; AFAHAS'YEV, A.P.;

SAMORUKOV, D.A.; GUSEV, S.S.; DOGADIN, V.H.; RAMHMSKIY,B.H.;

PIOHTKOVSKIY, B.A.; SVERDEOVA, I.S., red.; KARABILOVA,S.F.,

tekhn, red.

[Electric communications and wire broadcasting] Blektricheskaia sviaz' i radiofikatsiia. Moskva, Gos. izd-vo lit-ry po voprosam sviazi i radio, 1961. 607 p. (MIRA 14:5) (Telephone) (Wire broadcasting)

6.4000 (1159,1331)

28014 8/106/61/000/009/002/008 A055/A127

AUTHOR:

Kantor, L. Y.

TITLE:

Method of reducing cross-talk in broadcasting and communication

channels

PERIODICAL:

Elektrosvyaz', no. 9, 1961, 8 - 14

TEXT: In multichannel communication systems with frequency division, interferences between channels can be reduced by using the controlled carrier modulation ("s peremennym urovnem nesushchey"). The author uses this modulation method and shows its efficiency as regards cross talk suppression. The AM modulated signal with a slowly varying carrier $U_{\rm O}$ (t) can be expressed as:

#

$$u = U_0(t) \left[1 + o \frac{U_{\Omega}}{U_0(t)} \cos \Omega t \right] \cos \omega t, \qquad (1)$$

When U_{delay} (Figure 1) is equal to zero (the present analysis is limited to this case), we have:

Card 1/7

(4)

28044 8/106/61/000/009/002/008 A055/A127

Method of reducing cross talk

$$U_{O}(t) = U_{O \text{ max}} - K (U_{O \text{max}} - U_{\Omega}).$$

In (1) and (4), U_{Ω} is the modulating voltage amplitude, $U_{0 \text{ max}}$ and $U_{\Omega \text{ max}}$ are the amplitude of the carrier and of the modulating signal at maximum modulation, respectively; k and c are proportionality coefficients.

When $U_{\Omega} = 0$, $U_{0}(t) = U_{0 \min} = U_{0 \max} - k U_{\Omega \max}$ (41)

where

$$K = \frac{U_{0 \text{ max}} - U_{0 \text{ min}}}{U_{\Omega \text{ max}}}$$
 (5)

Using (5), formula (4) can be written as follows:

$$\frac{U_O(t)}{U_{O \text{ max}}} = p + \rho - p\rho, \qquad (4'')$$

Card 2/7

Method of reducing cross talk

28044 \$/106/61/000/009/002/008 A055/A127

where
$$p(t) = \frac{U_{\Omega}}{U_{\Omega \max}}$$

and $\rho(t) = \frac{U_{O min}}{U_{O max}}$

In the limit case $U_{0 \text{ min}} = 0$, $K = \frac{U_{0 \text{ max}}}{U_{0 \text{ max}}}$

(5')

_ (6)

and

$$U_O(t) = k U_O$$
.

(411)

In this case, the modulation factor $m = \frac{C}{k}$ is constant at any modulating voltage. Figure 1 shows one of the possible systems of AM modulation with controlled carrier. After mentioning also another system (intended for anode modulation), the author proceeds to the analysis of the cross talk. To the nonlinear element characterized by the cubic equation:

$$u = U_{\perp} + au_{inp} + bu_{inp}^3$$

are applied two AM modulated signals, i.e.:

$$u_{\text{inp}} = U_{10}(t) [1 + m_1(t) \cos \Omega_1 t] \cos \omega_1 t + U_{20}(t) [1 + m_2(t) \cos \Omega_2 t] \cos \omega_2 t.$$

Card 3/7

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6"

28044 8/106/61/000/009/002/008 A055/A127

Method of reducing cross talk

The interference from the first channel at the output of the receiver of the second channel can be determined by equations (6) and (7). It is:

Int =
$$\frac{3}{2} b U_{10}^{2}(t) m_{1} [2 \cos \Omega_{1} t + 2 \cos \Omega_{1} t m_{2} \cos \Omega_{2} t + m_{1} \cos^{2} \Omega_{1} t + m_{1} \cos^{2} \Omega_{1} t m_{2} \cos \Omega_{2} t].$$
 (8)

A symmetrical expression is obtained for the interference from the second channel at the output of the receiver of the first channel. Examining the interference in the second channel, the author considers, first, the spacing moment in this channel ($m_2 = 0$), since cross talk is then particularly noticeable. When $m_2 = 0$, the expression (8) is reduced to two terms, and the second of these two terms (representing a much smaller interference) can be neglected. Under these conditions, the ratio between the interference amplitude and the amplitude of the useful signal at maximum modulation signal will be:

$$\frac{\text{Int}}{\text{Sign}} = 3 \frac{b}{a} \frac{U_{10}^{2}(t) U_{20}(t) m_{1}}{U_{20 \text{ max}} m_{2 \text{ rat}}}$$
(9)

Card 4/7

2⁸⁰hh s/106/61/000/009/002/008 A055/A127

Method of reducing cross talk

 m_2 rat being the rated modulation factor in the second channel [at $U_{20}(t)=U_{20~mar}$]. It is evident that the passage to the controlled carrier modulation method in the interfering channel (first channel in the now examined case) reduces cross talk. Formula (9) contains:

$$U_{10}^{2}(t) m_{1} = U_{10}(t) c U_{1Q},$$
 (10)

and, in the controlled carrier method, U_{10} decreases in comparison with usual AM (for the same value of U_{1Q}) in accordance with formula (+"). The cross talk decrease, at a certain moment t, [for $U_Q = U_Q$ (t)] will be equal to:

$$\frac{(Int/Sign)_{contr.carrier}}{(Int/Sign)_{norm.}} = p(t) (1 - \rho) + \rho.$$
 (11)

The cross talk suppression is, however, much more pronounced when the controlled carrier method is used in the second channel itself (i.e., in the channel subjected to cross talk). During the signal intervals in this channel $[U_{20}(t) = U_{20 \text{ min}}]$, the cross talk, according to formula (9), will be reduced

Card 5/7

280山

Method of reducing cross talk

S/106/61/000/009/002/008 A055/A127

U_{20 max}

(15)

times. Only the intervals have been considered until now. When the useful signal is modulated, its carrier grows, and the gain as regards cross talk suppression decreases, becoming equal to zero at maximum modulation. But the masking effect of the useful transmission renders this growth unnoticeable to the ear as has been proved experimentally. The practical use of AM with controlled carrier in h-f broadcasting channels permitted to reduce cross talk in exact agreement with the formulae derived in this article. There are 5 figures and 6 Soviet--bloc references.

#

SUBMITTED:

May 10, 1961.

[Abstracter's note: The following subscripts and symbols are translated in formulae: min stands for MMH; max stands for MMK; delay stands for 310; inp stands for BX; Int(interference) stands for N; sign.(signal) stands for C; rat (rated) stands for H (nominal'nyy); norm (normal) stands for HOPM.]

Card 6/7

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6"

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000520420002-6

700

8/019/61/000/010/019/077 A156/A128

6,4000

AUTHOR:

Kantor, L.Ya.

TITLE:

Method of suppressing cross interferences

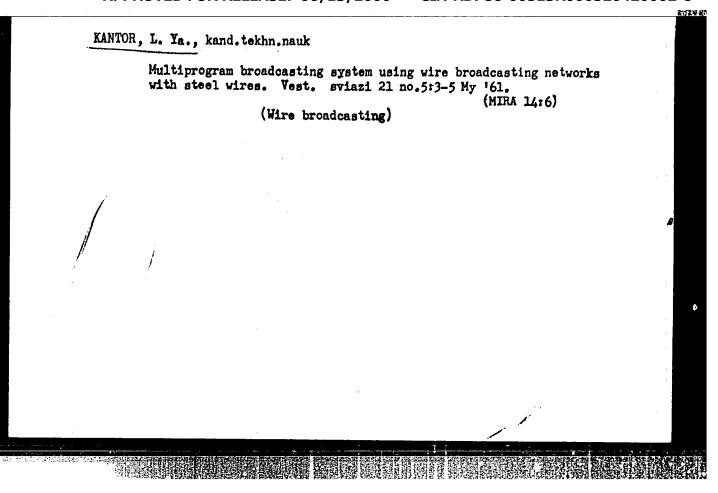
PERIODICAL:

Byulleten' izobreteniy, no. 10, 1961, 26

TEXT: Class 21a⁴, 14₀₁. No. 138275 (667141/26 of May 19, 1960). Cross interferences in transmission channels or radio broadcasting channels, where the carrier level drops during transmission pauses tens of times, are suppressed by using the method of variable carrier amplitude modulation.

l_B

Card 1/1



200 mm 100 mm 1

KANTOR, Lev Yakovlevich; KHVATOVA, L.M., otv. red.; NOVIKOV, S.A., red.; SLUTSKIN, A.A., tekhn. red.

[Multiple program broadcasting and wire broadcasting net-works]Mnogoprogrammnoe veshchanie po radiotransliatsionnoi seti. Moskva, Svias'izdat, 1962. 57 p. (MIRA 15:10) (Wire broadcasting)

GORON, Isaak Yevseyevich; KANTOR, L.Ya., otv. red.; MCVIKOV, S.A., red.; SHRFER, G.I., takkn. red.

[Correction of amplitude-frequency distortions] Korrektirovanie amplitudno-chastotnykh iskazhenii. Moskva, Sviazilidat, 1963. '55 p. (MIRA 16:6)

(Wire broadcasting) (Television)

KANTOR, L.Ya.; GUMELYA, A.N.; ROZENHENG, Ta.G.; AFANAS'YEV, A.P.;

SAMORUKOV, D.A.; GUSEV, S.S.; DOGADIN, V.N.; RAMERSKIY,

B.N.; KARASIK, N.S.; PIONTKOVSKIY, B.A.; Prinimal uchastiye

B.N.; MARKOCH, K.G., tekhn. red.

[Electrical communications and wire broadcasting] Elektricheskaia svias' i radiofikatsiia. [By] L.IA.Kantor i dr.

cheskaia svias' i radiofikatsiia. [By] L.IA.Kantor i dr.

(MIRA 16:8)

(Wire broadcasting) (Telecommunication)

KANTOR, L.Ya., kand.tekhn.nauk

Choice of a level for multiple-program broadcasting. Vest. sviazi
(MIRA 17:2)
23 no.12:6-7 D '63.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6"

The sound of the second state of the second second

KANTOR, L.Ya., kand.tekhn.nauk; SHERSHAKOVA, A.V., inzhener; ZASLAVSKIY, S.A.,

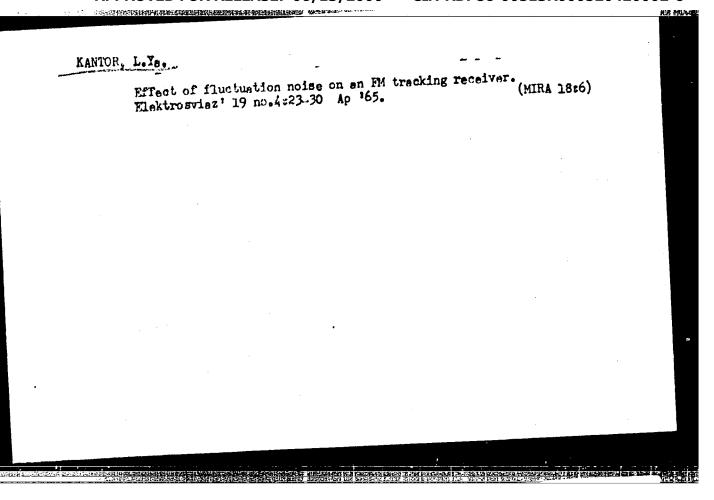
Multiprogram group-type receiver for operation in wire broadcasting networks. Vest. svinzi 24 no.2:3-5 F '64.

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6

KANTOR, L.Ya., kand. tekhn. nauk; KOGAN, V.A., insh.

New transmitter for three-program wire broadcasting. (MIRA 17:12)
24 no.10:5-8 0 '64.

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6



KALASHNIKOV, N.I.; KANTOR, L.Ya.; BYKOV, V.L.

International experiment in radio communication viu an artificial satellite of the earth and the moon. Elektrosviaz 19 no.7:25-30 J1 165.

(MIRA 18:7)

_ <u>L 65295-65</u> EMT(d)/EMT(1)/FS(v)-3/	man 2 TT/AST/OV		
AUTHORS: Getmantery G. G. Kalash Yerukhimov, E. H. Bellikovich, V. V. Tu. S. Tumliov, H. Til Hitrakov, J. A. G.; Cherepovichiv, V. A.; Akia, TITLE: The results of an experiment moon at a frequency of 162.4 magacy and Zimenki SOUNCE: Kosmicheskiye isolodovaniy TOPIC TACS: moon, eatellite sommer satellite tracking, scientific res- scope, Zimenki observatory redio to ARSTRACT: During February March 1 of the WA, and the General Feet G experiment to cetablish emony re paceive satellite "Echo-3" and the	IR/0293/65/003 629.195.2:621. Inikov. N. II.; Brkov. Y. W. Ben The Bethnin Y. M. Kentor ke I LAN Puritey, I. M. Kentor ke I	ediktor, Ta. Asian in the standard in contents on the same rate to the same rate t	
Cod 1/2		•	
•			
	: •		

L 65295-65 ACCESSION NR: AP5021255 tests of 10-15 minutes (the time interval permitted by Echo's orbit), and the moon was used for 15 test runs between the Echo tests. The transmitting equipmoon was used for 15 test runs between the Echo tests. The transmitting equipment at Jodrell Bank and the receiving unit of the Zimenki Observatory are described in detail. Echo orbit information furnished by NASA, visual observations, and radio tracking data from fixed stations were fed to a BESH-2 electronic calculator which provided programmed tracking control. The received signal exhibited strong fluctuations separable into two periods: 1) a 1-2 minute fluctuation associated with Echo-2 distortion from a sphere and with tracking errors; 2) a 3-10 second rapid associated with small surface irregularities. The rapid fluctuasociated with Echo-2 distortion from a sphere and with tracking errors; 2) a 3-10 second period associated with small surface irregularities. The rapid fluctuations varied with each test. Voice signals, slowed by a factor of 8, were barely intelligible. Telegraph, teletype, and photofacesimile transmission, in general, intelligible. Telegraph, teletype, and photofacesimile transmission, in general, were unsatisfactory, but in periods of high signal-to-noise ratios intelligible messages were received. The moon transmissions were not as clear but did furnish messages were received. Unexpected transmission losses included 3-5 db for polarisation losses and 1-2 db for unknown causes. The international conservation was excellent, with the Seviet submitting a complete remort. Offers for further con-

excellent, with the Soviet submitting a complete report. Offers for further co-operation have been extended. Orig. art. has: 3 tables, 7 figures, and 4 for-ASSOCIATION SUBMITTED: 18April 100 REF 50V: 000 Cort 2/27/4

ENCL: 00 OTHER: 002

THE SHALL SHEET STATE OF THE SHALL SHEET S

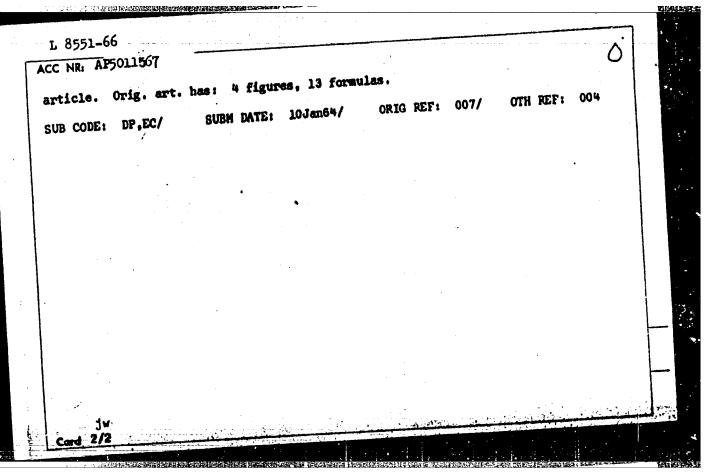
SUB CODE: AL, EC

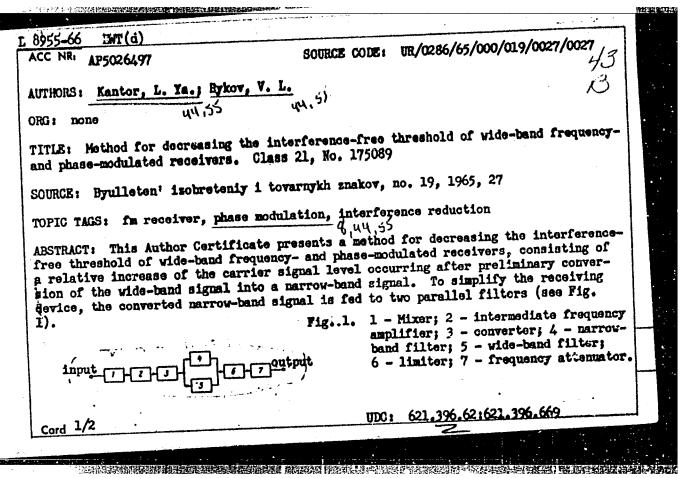
"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000520420002-6

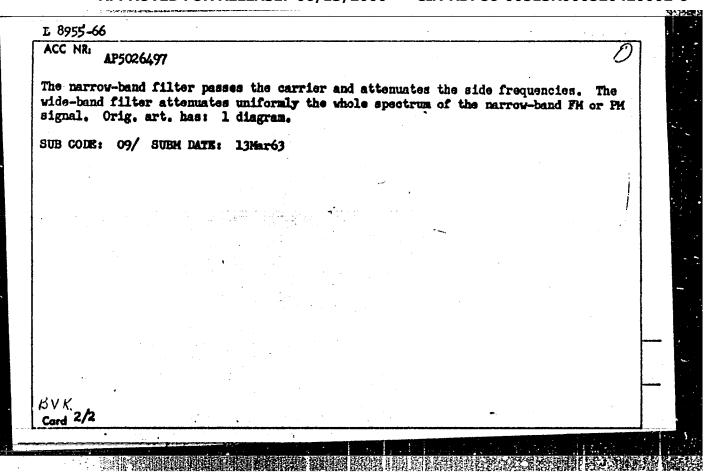
小公司现在的证据的证据的证据的证据的证据的证据的证据的证明 UR/0106/65/000/004/0023/0030 EMI(q) L 85, 1-66 SOURCE CODE: AP5011567 ACC NRI Kantor, L. AUTHOR: ORG: none TITLE: Effect of jitter on an FM tracking receiver SOURCE: Elektrosvyaz', no. 4, 1965, 23-30 TOPIC TAGS: information theory, tracking system, signal interference, FM receiver ABSTRACT: The author attempts to refine Inlou's theory on noises in a receiver with frequency compression (L. Inlou, "Using Frequency Compression to Reduce the Carrier-to-Noise Threshold in FM Signals", Trudy instituta radioinshenerov, No. 1, 1962). Experiments are conducted to show that there is a noticeable increase in noise and a shift in the threshold point at a frequency compression considerably lower than that given by Inlou as optimum, i. e. under conditions where the frequency compression threshold should come much later than the threshold for the direct channel. Errors are pointed out in several other papers dealing with the theory of FM receivers with frequency compression. Formulas are derived for optimizing the parameters of receivers of this type. A method is proposed for determining the interference threshold of an FM receiver with a tracking filter. The author thanks Yu. Afanas'yev, Ye. Okhtyarkin, V. Bykov and M. Sankina for taking part in preparation and discussion of the UDC: 621.396.621.33:621.391.822.3 Card 1/2

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6





"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6



L 20971-66 EWT(d)/FSS-2/EWT(1)/EEC(k)-2

AST/TT/GW

ACCESSION NR: AP5018025

UR/0106/65/000/007/0025/0030

621.372.553

AUTHOR: Kalashnikov, N. I.; Kantor, L. Ya.; Bykov, V. L.

TITLE: International experimental radio communication via a satellite and the

Moon

SOURCE: Elektrosvyaz', no. 7, 1965, 25-30

TOPIC TAGS: satellite communication

ABSTRACT: During the period 21 Feb - 8 Mar 64, experiments with radio communication between Jodrell Bank Observatory near Manchester, England, and Zimenki Observatory near Gor'kiy, SSSR, via the USA "Echo-2" passive satellite (34 sessions) and via the Moon (10 sessions) were conducted. From Jodrell to Zimenki, cw, 400-cps AM, start-stop telegraph, Morse telegraph, facsimile, and time-stretched speech signals were transmitted. The Jodrell 1-kw 162.4-mc transmitter operated with a parabolic 76-m diameter, 40-db gain 1.8° angle

Card 1/2

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000520420002-6"

THE MAN ELECTRIC STREET OF THE PROPERTY OF THE